

In view of interview with the applicant's representative, a supplemental office action is issued. The applicants submitted preliminary amendment, which was not reflected in the FOAM. Since new claims are mapped exactly the same as original claims, all prior art rejections are incorporated herein and only restated to reflect newly numbered claims. As a result, time will not be restarted. All claims objections have been addressed in the preliminary amendment and are hereby withdrawn.

*Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 45-88 are rejected under 35 U.S.C. 103(a) as being unpatentable over EZAWA (US 2002/0177641) in view of NAKAMURA (US 6,333,375) or vice-versa.

The prior art of EZAWA discloses composition for a tire [0004], specifically tire tread. Please see examples in Table I for anticipatory composition.

Rubber – diene rubber or mixture of diene rubbers 100 pbw

Reinforcing filler – silica

Stearic acid - 2 pbw

Zinc oxide – 3 pbw, and

Stearic acid amide – 0.75 pbw.

In the disclosure of EZAWA, SBR1500 is a JSR tradename and it is cold emulsion polymerized SBR with glass transition temperature of less than 5°C. Rubbers are all diene rubbers and specific examples include SBR, BR (examples) as well as EPR and butyl rubbers [0020].

The composition of EZAWA also discloses use of other customary additives such as sulfur based vulcanizing agents, silane coupling agents as well as additional reinforcing fillers,

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such as carbon black. Specification also discloses wider ranges of the components discussed above. Specifically the range for fatty acid amide is 0.3-10 pbw [0014].

Addition of fatty acid amide as disclosed in EZAWA improves dispersion of silica within polymeric matrix.

The prior art of NAKAMURA as disclosed in TABLES III, IV and V of this prior art discloses also composition for tire tread comprising following:

Rubber – diene rubber or mixture of diene rubbers 100 pbw

Reinforcing fillers – silica

Zinc oxide - 2-3 pbw

Stearic acid – 2-3 pbw

Fatty acid salt – 3 pbw

Wherein fatty acid salt is defined in specification, col. 14, wherein zinc salts of the fatty acids are listed as preferred embodiments. Examples include zinc stearate.

The prior art of NAKAMURA also teaches use of other customary additives in the tire industry and these customary additives include also vulcanizing agents, silane coupling agents as well as additional reinforcing fillers such as carbon black.

As per teachings of NAKAMURA composition that utilizes salts of fatty acids has improved heat build-up, abrasion resistance and processability, since fatty acids are known lubricants.

The combination of two known compositions is expected to work in additive or cumulative manner. *In re Kerkhoven* 626 E.2d 846, 850 205 USPQ 1069, 1072 (CCPA 1980).

In the light of the above disclosure, it would have been obvious to one having ordinary skill in the art at the time of the instant invention to combine the compositions of EZAWA and NAKAMURA and thereby arrive at a tire tread with improvements suggested by both disclosure, wherein the tire tread would have better dispersion of filler, specifically silica, within diene elastomer matrix as well as lower heat build-up, processability and tensile properties.

5. Claims 45-50, 53-57, 59-70, 73-80, 84-88 are rejected under 35 U.S.C. 103(a) as being unpatentable over AQUIRE (US 5,656,680).

The prior art of AQUIRE discloses composition for tire that comprises processing aid. As per example 6 (col. 16) the processing aid comprises 7 pbw of stearamide and 16 pbw of zinc stearate. Table I further teaches the rest of the components, which include stearic acid 2 pbw and zinc oxide 3 pbw.

Rubber of AQUIRE is diene rubber such as SBR and/or BR, EPD rubber (col. 10) and the like.

The only deficiency of the composition is that prior art discloses the use of 16 pbw of zinc stearate while the present claims require 15 pbw

It is apparent, however, that the instantly claimed 15 pbw and that taught by AQUIRE 16 pbw are so close to each other that the fact pattern is similar to the one in In re Woodruff, 919 F.2d 1575, USPQ2d 1934 (Fed. Cir. 1990) or Titanium Metals Corp. of America v. Banner, 778 F.2d 775, 227 USPQ 773 (Fed.Cir. 1985) where despite a “slight” difference in the ranges the court held that such a difference did not “render the claims patentable” or, alternatively, that “a prima facie case of obviousness exists where the claimed ranges and prior art ranges do not

overlap but are close enough so that one skilled in the art would have expected them to have the same properties”.

In light of the case law cited above and given that there is only a “slight” difference between the 16 pbw of fatty acid salt disclosed by AQUIRE and the 15 pbw disclosed in the present claims and further given the fact that no criticality is disclosed in the present invention with respect to the upper range of salt of fatty acid, it therefore would have been obvious to one of ordinary skill in the art that the amount disclosed in AQUIRE disclosed in the present claims is but an obvious variant of the amounts disclosed in present invention and thereby one of ordinary skill in the art would have arrived at the claimed invention.

On 9/30/2004 the applicants amended specification in several places. It is USPTO practice to submit an entire paragraph with changes or additions either underlined much like with the claims. The amendment to the specification is therefore objected to.

In addition, since instant invention is a 371 continuation, the first paragraph should contain priority information. Applicants are requested to incorporate such information.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katarzyna Wyrozebski whose telephone number is (571) 272-1127. The examiner can normally be reached on Mon-Thurs 8:30 AM-2:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Katarzyna Wyrozebski/  
Primary Examiner, Art Unit 1796  
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